IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

TSUCHIMOTO et al. Confirmation No.:9920

Serial No.: 10/056,752 Group Art Unit: 1733

Filed: January 23, 2002 Examiner: GOFF II, JOHN L

For: MANUFACTURING METHOD OF POLARIZING FILM, OPTICAL FILM, and VISUAL DISPLAY

DECLARATION UNDER RULE 1.132

Commissioner for Patents
P.O.Box 1450
Alexandria, VA 22313-1450

Sir:

I, Kazuki TSUCHIMOTO, a citizen of Japan and residing at 1-1-2, Shimohozumi, Ibaraki-shi, Osaka, 567-8680 Japan, c/o: ENGINEERING DEVELOPMENT SECTION, PRODUCTION ENGINEERING CENTER, OPTICAL RELLATED PRODUCTS DIVISION of NITTO DENKO CORPORATION, declare and Say as follows:

1. I was graduated from Department of Mechanical Engineering, Toyota National College of Technology in 1984.

2. Since 1984 to the present time, I have been employed by NITTO DENKO CORPORATION.

3. I am one of the inventors of the above-identified application and am familiar with the subject matter thereof.

4. I have read the Official Action mailed and the references

cited therein and are familiar with the subject matter thereof.

5. Contents of Experiments:

Experiments were conducted shown below to compare the difference of the heating period of time between the cited reference (Raabe et al. US 4370374) and the present invention.

(Experiments)

A polarizing film was prepared in order to observe the optical properties that are transmittance and polarization degree.

A polarizing film was prepared according to the description in the specification as filed.

A protection film having a single structure of a polypropylene (thickness of 60 μm) with softening point of 135 ℃ was prepared. The thickness of the protection film is as same as the thickness of the protection film used in the specification as filed. Note, in the experiments, though the protection film having a single structure is used instead of a protection film having a two-layer structure described in the specification as filed, a damage for the optical properties of the polarizing film when heated is influenced by the thickness and material but not layer structure.

The protection films were laminated onto both sides of the polarizer without using any adhesives, subsequently, the laminated films were subjected to a uniformly distributed pressure on a hot plate with heat at 130 ℃, which is the same temperature of the Example described in the specification as filed, for the whole surface. A heating period of time is changed as in Table 1. And the polarizing films (samples) were obtained. The two samples were prepared at same heating period of time.

And the optical properties of the polarizing films were

measured with spectral transmittance measurement DOT-3C made by Murakami Color Research Laboratory. The optical properties measured were evaluated in comparison with a standard, which a typical commercial polarization film (SEG 5425) is made by NITTO DENKO CORPORATION.

Results: shown in Table 1

Table 1

	optical properties	
	transmittance	polarization degree
	Standard requirement 43.2-45.5%	Standard requirement >99.8%
Ref:SEG5425	44.368%	99.945
Ref:SEG5425	44.294%	99.940
Heating period of time		
130℃-5sec	44.821	99.867
130℃-5sec	44.803	99.875
130℃-10sec	45.173	99.206
130℃-10sec	45.107	99.202
130℃-15sec	45.186	99.153
130℃-15sec	45.174	99.189

Discussion:

Samples heated for 10 seconds or more as are the case adopting the heat condition of the cited reference (Raabe et al. US 4370374) is off the standard requirement and inferior to the optical properties, especially polarization degree.

On the other hand, samples heated for 5 seconds as are the case adopting the heat condition of the present invention meet the standard requirement.

The above experiments show that the heat condition of the cited reference (Raabe et al. US 4370374) is not able to apply to the polarizing film of the present invention requiring the optical properties.

7. I declare further that all statements made herein of may own knowledge are true, and that all statements on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-identified application or any patent issuing thereon.

this day of , 2005 5 26

Kazuki Tsuchimoto